INDICATED HYDROCARBON LIST

Central, Eastern and Western

Gulf of Mexico OCS

December 2002

Minerals Management Service
Office of Resource Evaluation
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INTRODUCTION

An **Indicated Hydrocarbon List** is now available from the Resource Evaluation Office of the Minerals Management Service (MMS). The list identifies unleased Central, Eastern and Western Gulf of Mexico tracts that have wellbores with indicated hydrocarbons. In addition, the list provides hydrocarbon information for two categories of selected wells from active leases in the Gulf of Mexico. The **Indicated Hydrocarbon List** will be made available to the public approximately three months prior to each Gulf of Mexico sale.

To ensure a current **Indicated Hydrocarbon List** for the upcoming sale, the list will be updated approximately one month before that sale to consider the most recently relinquished tracts. The addendum will be sent to any customer upon request, and will be available "... at the MMS Web site, (http://www.gomr.mms.gov), under Offshore Information – "Region Activities."

OBJECTIVE

In the Gulf of Mexico OCS, there are hundreds of unleased blocks with thousands of wellbores. Data on these wellbores are available at the time of lease termination, relinquishment, or expiration. The MMS believes that a document identifying those tracts with wells that encountered hydrocarbons in paying quantities would be beneficial to prospective bidders. The **Indicated Hydrocarbon List** includes three categories of unleased tracts: Classes C, F, and Q. Class C comprises expired tracts having wellbores with indicated hydrocarbons in paying quantities, for which the operators did not request qualification status. Class F tracts include leases that have produced and subsequently expired. These tracts are prime targets for undrilled traps and deeper wildcat plays. Tracts with expired leases that qualified and have at least one wellbore identified as containing hydrocarbons in paying quantities are listed as Class Q tracts. Tracts qualified before January 28, 2000 are pursuant to 30 CFR 250.11 and tracts qualified after Janurary 28, 2000 are per 30 CFR 250.115 or 116.

There are approximately 900 wellbores drilled each year on active

leases in the Gulf of Mexico OCS. The data on these wellbores are releasable to the public two years after the completion of operations or 30 days after the date of first production. The MMS believes it would benefit the industry to have a list that identifies those NONPROPRIETARY wellbores from active leases that have indicated hydrocarbons. The **Indicated Hydrocarbon List** includes two categories of wellbores on active leases: nonproducing and producing. The nonproducing wellbores have indicated hydrocarbons in paying quantities. If any of these wellbores qualified, the qualifying information is included. All producing wells must have produced for a period of time since they were completed. Various production data are included. This issue will contain information from November 1,1999 to November 1,2000, for a nonproducing well and from November 1,2001 to November 1,2002, for a producing well. Information on active leases will be covered in one year intervals in order to prevent any well data from not being included. Information not covered in any future **Indicated Hydrocarbon List** will be available upon request from this office. It is our hope that the publication of this list will permit industry to focus scarce resources on areas that may be of particular interest.

IMPROVEMENTS

This issue contains Class C and Class Q data for the Eastern Gulf of Mexico. The Office of Resource Evaluation is anxious to improve the List to meet the needs of industry. Any comments or suggestions for potential enhancements to the **Indicated Hydrocarbons List** would be appreciated. These may be offered by contacting:

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C E N T R A L

G U L F O F M E X I C O O C S

U N L E A S E D T R A C T S

Before January 28, 2000:

30 CFR 250.11
Determination of Well Producibility

Upon receiving a written request from the lessee, the District Supervisor will determine whether a well is capable of producing in paying quantities (production of oil, gas, or both in quantities sufficient to yield a return in excess of the costs, after completion of the well, of producing the hydrocarbons at the wellhead). Such a determination shall be based upon the following:

(a) A production test for oil wells shall be of at least 2 hours duration following stabilization of flow. A deliverability test for gas wells shall be of at least 2 hours duration following stabilization of flow or a four-point back-pressure test. The lessee shall provide the District Supervisor a reasonable opportunity to witness all tests. Test data accompanied by the lessee's affidavit, or third-party test data, may be accepted in lieu of a witnessed test, provided prior approval is obtained from the District Supervisor.

(b) In the Gulf of Mexico OCS Region, the following shall also be considered collectively as reliable evidence that a well is capable of producing oil or gas in paying quantities:

(1) A resistivity or induction electric log of the well showing a minimum of 15 feet of producible sand in one section that does not include any interval which appears to be water-saturated. In some cases, wells with less than 15 feet of producible sand in one section may be approved by the District Supervisor. All of the section counted as producible shall exhibit the following properties:

(I) Electrical spontaneous potential exceeding 20-negative millivolts beyond the shale base line. If mud conditions prevent a 20-negative millivolt reading beyond the shale base line, a gamma ray log deflection of at least 70 percent of the maximum gamma ray deflection in the nearest clean water-bearing sand may be substituted.

(ii) A minimum true resistivity ratio of the producible section to the nearest clean water-bearing sand of at least 5:1.

(2) A log indicating sufficient porosity in the producible section.

(3) Sidewall cores and core analyses which indicate that the section is capable of producing oil or gas or evidence that an attempt was made to obtain such cores.

(4) A wireline formation test and/or mud-logging analysis which indicates that the section is capable of producing oil or gas, or evidence that an attempt was made to obtain such tests.

After January 28, 2000:

30 CFR 250.115
How do I determine well producibility?

You must follow the procedures in this section to determine well producibility if your well is not in the GOM. If your well is in the GOM you must follow the procedures in either this section or in 250.116 of this subpart.

(a) You must write to the Regional Supervisor asking for permission to determine producibility.

(b) You must either:

(1) Allow the District Supervisor to witness each test that you conduct under this section; or

(2) Receive the District Supervisor's prior approval so that you can submit either test data with your affidavit or third party test data.

(c) If the well is an oil well, you must conduct a production test that lasts at least 2 hours after flow stabilizes.

(d) If the well is a gas well, you must conduct a deliverability test that lasts at least 2 hours after flow stabilizes, or a four-point back pressure test.

30 CFR 250.116
How do I determine producibility if my well is in the Gulf of Mexico?

If your well is in the GOM, you must follow either procedures in 250.115 of this subpart or the procedures in this section to determine producibility.

(a) You must write to the Regional Supervisor asking for Permission to determine producibility.

(b) You must provide or make available to the Regional Supervisor, as requested, the following log, core, analyses, and test criteria that MMS will consider collectively:

(1) A log showing sufficient porosity in the producible section.

(2) Sidewall cores and core analyses that show that the section is capable of producing oil or gas.

(3) Wireline formation test and/or mud-logging and/or mud-logging analyses that show that the section is capable of producing oil or gas.

(4) A resistivity or induction electric log of the well showing a minimum 15 feet (true vertical thickness except for horizontal wells) of producible sand in one section.

(c) No section that you count as producible under paragraph

(b)(4) of this section may include any interval that appears to be water saturated.

(d) Each section you count as producible under paragraph (b)(4) of this section must exhibit: A minimum true resisitivity ratio of the producible section to the nearest clean or water-bearing sand of at least 5:1; and

(1) One of the following:

(i) Electrical spontaneous potential exceeding 20-negative millivolts beyond the shale baseline; or

(ii)Gamma ray log deflection of at least 70 percent of the maximum gamma ray deflection in the nearest clean water-bearing sand – if mud conditions prevent a 20-negative millivolt reading beyond the shale line.

CLASS C TRACTS

Class C tracts are defined as unleased tracts which never produced, but have at least one wellbore which contains hydrocarbons of sufficient quantity and/or quality to have met the requirements of 30 CFR 250.11 or 30 CFR 250.115/116, had the operator requested a determination of well producibility. The tracts are identified by their **AREA** and **BLOCK** number. The wells within these tracts are identified by their **LEASE** number, **WELL** name, and **API** number. Additional well and lease information such as well **TOTAL DEPTH** (**MD** and **TVD**), **LEASE EXPIRATION DATE** (yymm) and **WATER DEPTH** (**FEET**) at the wellbore are also provided.

Hydrocarbon information for every well with pay on a Class C tract is also included. Hydrocarbons are divided into two groups: **PAY** and **SHOW**. **PAY** is defined by 30 CFR 250.11 or 30 CFR 250.115/116. The **PAY RANGE** is identified as being between the top of the shallowest pay (log **MD**) and the bottom of the deepest pay (log **MD**). The **PAY TYPE**, O for oil or G for gas, for each **PAY RANGE** is given. A **SHOW** is defined as a hydrocarbon accumulation greater than or equal to 5 feet and less than 15 feet. **SHOW RANGE** is determined independently of the **PAY RANGE** present.

In several instances, the surface hole location of a wellbore is located in one block while the bottom hole location is in an adjoining block. In these cases, the tract containing the pay interval of the wellbore is classified as Class C. The block with the dry portion of the wellbore would **NOT** be considered a Class C tract.

The date in the upper right-hand corner of each page indicates when the Class C list was last updated.

CLASS F TRACTS

Class F tracts are defined as unleased tracts that were formerly fields or portions of fields that produced. The tracts are identified by the **AREA** and **BLOCK** number. The wells that produced from each tract are identified by their **LEASE** number, **WELL** name, and **API** number. Additional well and lease information such as well **TOTAL DEPTH** (**MD** and **TVD**), **LEASE EXPIRATION DATE** (yymm), **WATER DEPTH** (**FEET**) at the wellbore and **FIELD** name are also provided.

Production data for Class F tracts are provided by well and perforation interval. The perforation interval is identified by **TOP PERF** (**MD**) and **BASE PERF** (**MD**). The overall production depth interval for the tract is defined by the bold **MIN** and **MAX** perforation depths located beneath each of the aforementioned columns. Cumulative **OIL** (**BBLS**), **GAS** (**MCF**), and **WATER** (**BBLS**) production are given for each perforation. These values are totaled (bold numbers) and provided as cumulative production figures for the tract. The cumulative production volumes used are those reported in the Oil and Gas Operations Report A (OGORA). The length of time that each perforation produced is identified by the **FIRST PRODUCTION DATE** (yymm) and **LAST PRODUCTION DATE** (yymm). These dates are derived from first and last production volumes as reported in OGORA.

The date in the upper right-hand corner of each page indicates when the Class F list was last updated.

CLASS Q TRACTS

Class Q tracts are defined as unleased tracts with a wellbore that qualified under 30 CFR 250.11 or 30 CFR 250.115/116 but the tract did not produce. Copies of 30 CFR 250.11 and 30 CFR 250.115/116 are included at the beginning of the Central GOM section. The tracts are identified by their **AREA** and **BLOCK** number. The wells that qualified are identified by their **LEASE** number, **WELL** name, and **API** number. Additional well and lease information such as well **TOTAL DEPTH** (**MD** and **TVD**), **LEASE EXPIRATION DATE** (yymm) and **WATER DEPTH** (**FEET**) at the wellbore is also provided.

Qualification data for the well used to qualify a lease are listed. The list includes the **QUALIFICATION DATE**, **QUALIFICATION TYPE**, **PAY TYPE**, and **QUALIFICATION PAY INTERVAL**. The **QUALIFICATION TYPE** is indicated by: P - qualified by production from the well; T - qualified by productivity test data (i.e., DST); and D - qualified by determination (well logs, sidewall core analysis, etc.). **PAY TYPE** is indicated by O for oil or G for gas. **QUALIFICATION PAY INTERVAL** identifies the hydrocarbon sand interval (top **MD** and base **MD**) that the operator used to qualify the lease.

The date in the upper right-hand corner of each page indicates when the Class Q list was updated.

C E N T R A L

G U L F O F M E X I C O O C S

A C T I V E T R A C T S

SELECTED PRODUCING WELLS

Producing wells are defined as wellbores on active tracts that produced for a period of time and reached total depth between November 1,2001, and November 1,2002. The wellbores are identified by the **AREA**, **BLOCK** number, **LEASE** number, **WELL** name, and **API** number. Additional well information such as well **TOTAL DEPTH** (**MD** and **TVD**), **TD DATE** (yymmdd), **WATER DEPTH** (**FEET**) at the wellbore and **FIELD** name are also provided.

Production data for each wellbore are provided. The perforation interval (shallowest perforation to deepest perforation in the well) is identified by **PERF RANGE TOP** (**MD**) and **BASE** (**MD**). The **FIRST PROD DATE** identifies the date the wellbore started producing as reported by each district. The date in the upper right-hand corner of each page indicates when the producing wells on active tracts category was last updated.

SELECTED NONPRODUCING WELLS

Nonproducing wells are defined as wellbores that(1) are located on active leases, (2) were completed or had drilling operations finalized between November 1,1999, and November 1,2000, (3) had a well name between 001 and 005, and (4) never produced but contain hydrocarbons of sufficient quantity and/or quality to have met the requirements of 30 CFR 250.11 or 30 CFR 250.115/116 for determination of well producibility. The wellbores are identified by their **AREA, BLOCK** number, **LEASE** number, **WELL** name, and **API** number. Additional well information such as well **TOTAL DEPTH** (**MD** and **TVD**) and **WATER DEPTH** (**FEET**) at the wellbore are also provided.

Hydrocarbon information for every well with pay is included. Hydrocarbons are divided into two groups: **PAY** and **SHOW**. **PAY** is defined by 30 CFR 250.11 or 30 CFR 250.115/116. The **PAY RANGE** is identified as being between the top of the shallowest pay (log **MD**) and the bottom of the deepest pay (log **MD**). The **PAY TYPE**, O for oil or G for gas, for each **PAY RANGE** is given. A **SHOW** is defined as a hydrocarbon accumulation greater than or equal to 5 feet and less than 15 feet. **SHOW RANGE** is determined independently of the **PAY RANGE** present.

If a pay sand in the well was used to qualify the lease, then the qualification data are also listed. The data include the **QUALIFICATION DATE, QUALIFICATION TYPE, PAY TYPE,** and **QUALIFICATION PAY INTERVAL**. The **QUALIFICATION TYPE** is indicated by: T - qualified by productivity test data (i.e., DST); or D - qualified by determination (well logs, sidewall core analysis, etc.). **PAY TYPE** is indicated as Oil or Gas. **QUALIFICATION PAY INTERVAL** identifies the hydrocarbon sand interval (top **MD** and base **MD**) that the operator used to qualify the lease.

The date in the upper right-hand corner of each page indicates when the non-producing wells on active tracts category was last updated.

E A S T E R N

G U L F O F M E X I C O O C S

U N L E A S E D T R A C T S

Before January 28, 2000

30 CFR 250.11
Determination of Well Producibility

Upon receiving a written request from the lessee, the District Supervisor will determine whether a well is capable of producing in paying quantities (production of oil, gas, or both in quantities sufficient to yield a return in excess of the costs, after completion of the well, of producing the hydrocarbons at the wellhead). Such a determination shall be based upon the following:

(a) A production test for oil wells shall be of at least 2 hours duration following stabilization of flow. A deliverability test for gas wells shall be of at least 2 hours duration following stabilization of flow or a four-point back-pressure test. The lessee shall provide the District Supervisor a reasonable opportunity to witness all tests. Test data accompanied by the lessee's affidavit, or third-party test data, may be accepted in lieu of a witnessed test, provided prior approval is obtained from the District Supervisor.

(b) In the Gulf of Mexico OCS Region, the following shall also be considered collectively as reliable evidence that a well is capable of producing oil or gas in paying quantities:

(1) A resistivity or induction electric log of the well showing a minimum of 15 feet of producible sand in one section that does not include any interval which appears to be water-saturated. In some cases, wells with less than 15 feet of producible sand in one section may be approved by the District Supervisor. All of the section counted as producible shall exhibit the following properties:

(I) Electrical spontaneous potential exceeding 20-negative millivolts beyond the shale base line. If mud conditions prevent a 20-negative millivolt reading beyond the shale base line, a gamma ray log deflection of at least 70 percent of the maximum gamma ray deflection in the nearest clean water-bearing sand may be substituted.

(ii) A minimum true resistivity ratio of the producible section to the nearest clean water-bearing sand of at least 5:1.

(2) A log indicating sufficient porosity in the producible section.

(3) Sidewall cores and core analyses which indicate that the section is capable of producing oil or gas or evidence that an attempt was made to obtain such cores.

(4) A wireline formation test and/or mud-logging analysis which indicates that the section is capable of producing oil or gas, or evidence that an attempt was made to obtain such tests.

After January 28, 2000:

30 CFR 250.115
How do I determine well producibility?

You must follow the procedures in this section to determine well producibility if your well is not in the GOM. If your well is in the GOM you must follow the procedures in either this section or in 250.116 of this subpart.

(a) You must write to the Regional Supervisor asking for permission to determine producibility.

(b) You must either:

(1) Allow the District Supervisor to witness each test that you conduct under this section; or

(2) Receive the District Supervisor's prior approval so that you can submit either test data with your affidavit or third party test data.

(c) If the well is an oil well, you must conduct a production test that lasts at least 2 hours after flow stabilizes.

(d) If the well is a gas well, you must conduct a deliverability test that lasts at least 2 hours after flow stabilizes, or a four-point back pressure test.

30 CFR 250.116
How do I determine producibility if my well is in the Gulf of Mexico?

If your well is in the GOM, you must follow either procedures in 250.115 of this subpart or the procedures in this section to determine producibility.

(a) You must write to the Regional Supervisor asking for Permission to determine producibility.

(b) You must provide or make available to the Regional Supervisor, as requested, the following log, core, analyses, and test criteria that MMS will consider collectively:

(1) A log showing sufficient porosity in the producible section.

(2) Sidewall cores and core analyses that show that the section is capable of producing oil or gas.

(3) Wireline formation test and/or mud-logging and/or mud-logging analyses that show that the section is capable of producing oil or gas.

(4) A resistivity or induction electric log of the well showing a minimum 15 feet (true vertical thickness except for

horizontal wells) of producible sand in one section.

(c) No section that you count as producible under paragraph (b)(4) of this section may include any interval that appears to be water saturated.

(d) Each section you count as producible under paragraph (b)(4) of this section must exhibit:

(1) A minimum true resisitivity ratio of the producible section to the nearest clean or water-bearing sand of at least 5:1; and

(2) One of the following:

(i) Electrical spontaneous potential exceeding 20-negative millivolts beyond the shale baseline; or

(ii)Gamma ray log deflection of at least 70 percent of the maximum gamma ray deflection in the nearest clean water-bearing sand – if mud conditions prevent a 20-negative millivolt reading beyond the shale line.

CLASS C TRACTS

Class C tracts are defined as unleased tracts which never produced, but have at least one wellbore which contains hydrocarbons of sufficient quantity and/or quality to have met the requirements of 30 CFR 250.11 or 30 CFR 250.115/116 had the operator requested a determination of well producibility. The tracts are identified by their **AREA** and **BLOCK** number. The wells within these tracts are identified by their **LEASE** number, **WELL** name, and **API** number. Additional well and lease information such as well **TOTAL DEPTH** (**MD** and **TVD**), **LEASE EXPIRATION DATE** (yymm) and **WATER DEPTH** (**FEET**) at the wellbore are also provided.

Hydrocarbon information for every well with pay on a Class C tract is also included. Hydrocarbons are divided into two groups: **PAY** and **SHOW**. **PAY** is defined by 30 CFR 250.11 or 30 CFR 250.115/116. The **PAY RANGE** is identified as being between the top of the shallowest pay (log **MD**) and the bottom of the deepest pay (log **MD**). The **PAY TYPE**, O for oil or G for gas, for each **PAY RANGE** is given. A **SHOW** is defined as a hydrocarbon accumulation greater than or equal to 5 feet and less than 15 feet. **SHOW RANGE** is determined independently of the **PAY RANGE** present.

In several instances, the surface hole location of a wellbore is located in one block while the bottom hole location is in an adjoining block. In these cases, the tract containing the pay interval of the wellbore is classified as Class C. The block with the dry portion of the wellbore would **NOT** be considered a Class C tract.

The date in the upper right-hand corner of each page indicates when the Class C list was last updated.

CLASS Q TRACTS

Class Q tracts are defined as unleased tracts with a wellbore which qualified under 30 CFR 250.11 or CFR 250.115/116 but the tract did not produce. Copies of 30 CFR 250.11 and 30 CFR 250.115/116 are included at the beginning of the Western GOM section. The tracts are identified by their **AREA** and **BLOCK** number. The wells that qualified are identified by their **LEASE** number, **WELL** name, and **API** number. Additional well and lease information such as well **TOTAL DEPTH** (**MD** and **TVD**), **LEASE EXPIRATION DATE** (yymm) and **WATER DEPTH** (**FEET**) at the wellbore are also provided.

Qualification data for the well used to qualify a lease are listed. The list includes the **QUALIFICATION DATE**, **QUALIFICATION TYPE**, **PAY TYPE**, and **QUALIFICATION PAY INTERVAL**. The **QUALIFICATION TYPE** is indicated by: P - qualified by production from the well; T - qualified by productivity test data (i.e., DST); and D - qualified by determination (well logs, sidewall core analysis, etc.). **PAY TYPE** is indicated by O for oil or G for gas. **QUALIFICATION PAY INTERVAL** identifies the hydrocarbon sand interval (top **MD** and base **MD**) that the operator used to qualify the lease.

The date in the upper right-hand corner of each page indicates when the Class Q list was last updated.

W E S T E R N

G U L F O F M E X I C O O C S

U N L E A S E D T R A C T S

Before January 28, 2000:

30 CFR 250.11
Determination of Well Producibility

Upon receiving a written request from the lessee, the District Supervisor will determine whether a well is capable of producing in paying quantities (production of oil, gas, or both in quantities sufficient to yield a return in excess of the costs, after completion of the well, of producing the hydrocarbons at the wellhead). Such a determination shall be based upon the following:

(a) A production test for oil wells shall be of at least 2 hours duration following stabilization of flow. A deliverability test for gas wells shall be of at least 2 hours duration following stabilization of flow or a four-point back-pressure test. The lessee shall provide the District Supervisor a reasonable opportunity to witness all tests. Test data accompanied by the lessee's affidavit, or third-party test data, may be accepted in lieu of a witnessed test, provided prior approval is obtained from the District Supervisor.

(b) In the Gulf of Mexico OCS Region, the following shall also be considered collectively as reliable evidence that a well is capable of producing oil or gas in paying quantities:

(1) A resistivity or induction electric log of the well showing a minimum of 15 feet of producible sand in one section that does not include any interval which appears to be water-saturated. In some cases, wells with less than 15 feet of producible sand in one section may be approved by the District Supervisor. All of the section counted as producible shall exhibit the following properties:

(I) Electrical spontaneous potential exceeding 20-negative millivolts beyond the shale base line. If mud conditions prevent a 20-negative millivolt reading beyond the shale base line, a gamma ray log deflection of at least 70 percent of the maximum gamma ray deflection in the nearest clean water-bearing sand may be substituted.

(ii) A minimum true resistivity ratio of the producible

section to the nearest clean water-bearing sand of at least 5:1.

(2) A log indicating sufficient porosity in the producible section.

(3) Sidewall cores and core analyses which indicate that the section is capable of producing oil or gas or evidence that an attempt was made to obtain such cores.

(4) A wireline formation test and/or mud-logging analysis which indicates that the section is capable of producing oil or gas, or evidence that an attempt was made to obtain such tests.

After January 28, 2000:

30 CFR 250.115
How do I determine well producibility?

You must follow the procedures in this section to determine well producibility if your well is not in the GOM. If your well is in the GOM you must follow the procedures in either this section or in 250.116 of this subpart.

(a) You must write to the Regional Supervisor asking for permission to determine producibility.

(b) You must either:

(1) Allow the District Supervisor to witness each test that you conduct under this section; or

(2) Receive the District Supervisor's prior approval so that you can submit either test data with your affidavit or third party test data.

(c) If the well is an oil well, you must conduct a production test that lasts at least 2 hours after flow stabilizes.

(d) If the well is a gas well, you must conduct a deliverability test that lasts at least 2 hours after flow stabilizes, or a four-point back pressure test.

30 CFR 250.116
How do I determine producibility if my well is in the Gulf of Mexico?

If your well is in the GOM, you must follow either procedures in 250.115 of this subpart or the procedures in this section to determine producibility.

(b) You must write to the Regional Supervisor asking for Permission to determine producibility.

(b) You must provide or make available to the Regional Supervisor, as requested, the following log, core, analyses, and test criteria that MMS will consider collectively:

(1) A log showing sufficient porosity in the producible section.

(3) Sidewall cores and core analyses that show that the section is capable of producing oil or gas.

(3) Wireline formation test and/or mud-logging and/or mud-logging analyses that show that the section is capable of producing oil or gas.

(5) A resistivity or induction electric log of the well showing a minimum 15 feet (true vertical thickness except for horizontal wells) of producible sand in one section.

(e) No section that you count as producible under paragraph (b)(4) of this section may include any interval that appears to be water saturated.

(f) Each section you count as producible under paragraph (b)(4) of this section must exhibit: A minimum true resisitivity ratio of the producible section to the nearest clean or water-bearing sand of at least 5:1; and

(2) One of the following:

(i) Electrical spontaneous potential exceeding 20-negative millivolts beyond the shale baseline; or

(ii)Gamma ray log deflection of at least 70 percent of the maximum gamma ray deflection in the nearest clean water-bearing sand – if mud conditions prevent a 20-negative millivolt reading beyond the shale line.

CLASS C TRACTS

Class C tracts are defined as unleased tracts which never produced, but have at least one wellbore which contains hydrocarbons of sufficient quantity and/or quality to have met the requirements of 30 CFR 250.11 or 30 CFR 250.115/116, had the operator requested a determination of well producibility. The tracts are identified by their **AREA** and **BLOCK** number. The wells within these tracts are identified by their **LEASE** number, **WELL** name, and **API** number. Additional well and lease information such as well **TOTAL DEPTH** (**MD** and **TVD**), **LEASE EXPIRATION DATE** (yymm) and **WATER DEPTH** (**FEET**) at the wellbore are also provided.

Hydrocarbon information for every well with pay on a Class C tract is also included. Hydrocarbons are divided into two groups: **PAY** and **SHOW**. **PAY** is defined by 30 CFR 250.11 or 30 CFR 250.115/116. The **PAY RANGE** is identified as being between the top of the shallowest pay (log **MD**) and the bottom of the deepest pay (log **MD**). The **PAY TYPE**, O for oil or G for gas, for each **PAY RANGE** is given. A **SHOW** is defined as a hydrocarbon accumulation greater than or equal to 5 feet and less than 15 feet. **SHOW RANGE** is determined independently of the **PAY RANGE** present.

In several instances, the surface hole location of a wellbore is located in one block while the bottom hole location is in an adjoining block. In these cases, the tract containing the pay interval of the wellbore is classified as Class C. The block with the dry portion of the wellbore would **NOT** be considered a Class C tract.

The date in the upper right-hand corner of each page indicates when the Class C list was last updated.

Note: Tracts that were bid upon in Sale 184 are not included in this IHL.

CLASS F TRACTS

Class F tracts are defined as unleased tracts that were formerly fields or portions of fields that produced. The tracts are identified by the **AREA** and **BLOCK** number. The wells that produced from each tract are identified by their **LEASE** number, **WELL** name, and **API** number. Additional well and lease information such as well **TOTAL DEPTH** (**MD** and **TVD**), **LEASE EXPIRATION DATE** (yymm), **WATER DEPTH** (**FEET**) at the wellbore and **FIELD** name are also provided.

Production data for Class F tracts are provided by well and perforation interval. The perforation interval is identified by **TOP PERF** (**MD**) and **BASE PERF** (**MD**). The overall production depth interval for the tract is defined by the bold **MIN** and **MAX** perforation depths located beneath each of the aforementioned columns. Cumulative **OIL** (**BBLS**), **GAS** (**MCF**), and **WATER** (**BBLS**) production are given for each perforation. These values are totaled (bold numbers) and provided as cumulative production figures for the tract. The cumulative production volumes used are those reported in the Oil and Gas Operations Report A (OGORA). The length of time that each perforation produced is identified by the **FIRST PRODUCTION DATE** (yymm) and **LAST PRODUCTION DATE** (yymm). These dates are derived from first and last production volumes as reported in OGORA.

The date in the upper right-hand corner of each page indicates when the Class F list was last updated.

Note: Tracts that were bid upon in Sale 184 are not included in this IHL.

CLASS Q TRACTS

Class Q tracts are defined as unleased tracts with a wellbore that qualified under 30 CFR 250.11 or 30 CFR 250.115/116 but the tract did not produce. Copies of 30 CFR 250.11 and 30 CFR 250.115/116 are included at the beginning of the Central GOM section. The tracts are identified by their **AREA** and **BLOCK** number. The wells that qualified are identified by their **LEASE** number, **WELL** name, and **API** number. Additional well and lease information such as well **TOTAL DEPTH** (**MD** and **TVD**), **LEASE EXPIRATION DATE** (yymm) and **WATER DEPTH** (**FEET**) at the wellbore is also provided.

Qualification data for the well used to qualify a lease are listed. The list includes the **QUALIFICATION DATE**, **QUALIFICATION TYPE**, **PAY TYPE**, and **QUALIFICATION PAY INTERVAL**. The **QUALIFICATION TYPE** is indicated by: P - qualified by production from the well; T - qualified by productivity test data (i.e., DST); and D - qualified by determination (well logs, sidewall core analysis, etc.). **PAY TYPE** is indicated by O for oil or G for gas. **QUALIFICATION PAY INTERVAL** identifies the hydrocarbon sand interval (top **MD** and base **MD**) that the operator used to qualify the lease.

The date in the upper right-hand corner of each page indicates when the Class Q list was updated.

Note: Tracts that were bid upon in Sale 184 are not included in this IHL.

W E S T E R N

G U L F O F M E X I C O O C S

A C T I V E T R A C T S

SELECTED NONPRODUCING WELLS

Nonproducing wells are defined as wellbores that(1) are located on active leases, (2) were completed or had drilling operations finalized between November 1,1999, and November 1,2000, (3) had a well name between 001 and 005, and (4) never produced but contain hydrocarbons of sufficient quantity and/or quality to have met the requirements of 30 CFR 250.11 or 30 CFR 250.115/116 for determination of well producibility. The wellbores are identified by their **AREA, BLOCK** number, **LEASE** number, **WELL** name, and **API** number. Additional well information such as well **TOTAL DEPTH** (**MD** and **TVD**) and **WATER DEPTH** (**FEET**) at the wellbore are also provided.

Hydrocarbon information for every well with pay is included. Hydrocarbons are divided into two groups: **PAY** and **SHOW**. **PAY** is defined by 30 CFR 250.11 or 30 CFR 250.115/116. The **PAY RANGE** is identified as being between the top of the shallowest pay (log **MD**) and the bottom of the deepest pay (log **MD**). The **PAY TYPE**, O for oil or G for gas, for each **PAY RANGE** is given. A **SHOW** is defined as a hydrocarbon accumulation greater than or equal to 5 feet and less than 15 feet. **SHOW RANGE** is determined independently of the **PAY RANGE** present.

If a pay sand in the well was used to qualify the lease, then the qualification data are also listed. The data include the **QUALIFICATION DATE, QUALIFICATION TYPE, PAY TYPE,** and **QUALIFICATION PAY INTERVAL**. The **QUALIFICATION TYPE** is indicated by: T - qualified by productivity test data (i.e., DST); or D - qualified by determination (well logs, sidewall core analysis, etc.). **PAY TYPE** is indicated as Oil or Gas. **QUALIFICATION PAY INTERVAL** identifies the hydrocarbon sand interval (top **MD** and base **MD**) that the operator used to qualify the lease.

The date in the upper right-hand corner of each page indicates when the non-producing wells on active tracts category was last updated.

SELECTED PRODUCING WELLS

Producing wells are defined as wellbores on active tracts that produced for a period of time and reached total depth between November 1,2001, and November 1,2002. The wellbores are identified by the **AREA**, **BLOCK** number, **LEASE** number, **WELL** name, and **API** number. Additional well information such as well **TOTAL DEPTH** (**MD** and **TVD**), **TD DATE** (yymmdd), **WATER DEPTH** (**FEET**) at the wellbore and **FIELD** name are also provided.

Production data for each wellbore are provided. The perforation interval (shallowest perforation to deepest perforation in the well) is identified by **PERF RANGE TOP** (**MD**) and **BASE** (**MD**). The **FIRST PROD DATE** identifies the date the wellbore started producing as reported by each district. The date in the upper right-hand corner of each page indicates when the producing wells on active tracts category was last updated.